HISTORIC AMERICAN ENGINEERING RECORD

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Montgomery County Jail
Crawfordsville
Montgomery County
Indiana

Photographs and
Written and Historical data

Historic American Engineering Record
National Park Service

Department of Interior
Washington, D.C. 20240

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Montgomery County Jail

HAER IN-17

Location:	Southwest corner of Washington and Spring Streets, Crawfordsville UTM: 16.508390.4432410 Quad: Crawfordsville, Indiana
Date of Construction:	1882
Significance:	The Montgomery County Jail, the first of six rotary jails built in the Midwest during the second half of the nineteenth century, represents a significant attempt to answer the problem of human incarceration with an engineering solution.
Historians:	Robert Rosenberg Donald Sackheim

Designed by architect E.J. Hodgson and built by Hinkley and Norris in 1882, the Montgomery County Jail was an unusual experiment in penal engineering: a cylindrical cage which rotated around a central axis. The Montgomery County Jail is the oldest of six human squirrel cages, lazy susan jails, or rotary jails built in the midwest, and used a rotary system patented by W.H. Brown, B.F. Haugh, and John L. Ketcham.[1] The rotary system proved dangerous in operation, but it represented in theory an attempt to use 19th century engineering methods to solve current social problems.

In 1882 the idea of employing a circular design in prison architecture was not new. In his treatise on prison reform, The Penopticon, Jeremy Bentham suggested a circular prison, and in 1791 he designed a circular prison with stationary cells built into an exterior wall. In 1800 Benjamin F. Latrobe modified Bentham's idea of a circular prison in the design used for the state prison in Richmond, Virginia.

The addition of rotary motion to a circular prison was a novel idea and was patented by Benjamin F. Haugh and John L. Ketcham, partners in an architectural iron firm, with co-inventor W.H. Brown. They claimed:

> The object of our invention is to produce a jail or prison in which prisoners can be controlled without the necesssity of personal contact between them and the jailer or guard...The prisoners are handled without any possible chance of personal contact with any except the one desired, as the cell structure is rotated until the door opening of the cell desired is brought opposite the general opening in the outside grating, and while one cell occupies this position the rest must of necessity by securely closed. This arrangement makes the whole prison as convenient to the keeper as though it consisted of but a single prisoner.[2]

The rotary jail consisted of a giant stationary outer cylinder, or cage, which was probably bolted to a concrete or flagstone floor and to iron plates in the ceiling. Inside the outer cage was a 3-story inner cylinder which rotated around a central core. Each floor, girdled by an inner cage, was divided into eight cells, each of which had an opening in the inner cage. When the opening in the inner cage coincided with the single opening in the outer cage the prisoner gained access to the bullpen area.[3]

To rotate the inner cylinder, a hand crank transmitted power through pinions and gears to a large ring gear located beneath the floor of the lower story. One man was able to move the inner cylinder which was kept in alignment by iron casters beneath the first floor and the central service core collared to the ceiling which acted as an axis for the cylinder.

Each cell, shaped like a slice of pie, was constructed of

iron plate and contained a recess toilet and a water tap. The waste and water systems were connected to the central service core which acted as the axis of the central cylinder.

The cylinder was plated all around and collared above and below the cell floors. It contained the heating vent, which ran to a stove in the basement, an air duct, and a waste disposal system. An electric service was added sometime after initial construction was completed.

Problems soon developed with the rotary prison. Nearly all of the jails developed mechanical difficulties with the rotary cylinder. A more serious problem was the safety of the inmates who were frequently maimed by the rotating cylinder. Arms and legs caught between the bars might be crushed when the cylinder was rotated and one prisoner in the Maryville, Missouri jail was killed when his head was crushed between the inner and outer cylinders.

Luden suggests several plausible explanations for the adoption of the rotary jail in the Midwest.[4] With the settlement of the West during the 1870's and 1880's, many midwest towns were flooded with transients and experienced a sharp increase in crime. When the old jails proved inadequate new ones had to be built. Then, too, "Maybe the mechanical ingenuity which created the rotary jail is but a part of that same skill which had constructed the man-of-war the Monitor, with its revolving turret and the rotary action of the Gatling gun..." In the case of the Montgomery County Jail, he points out two factors which were probably important in the county's adoption of an untried piece of technology: Crawfordsville desperately needed a new jail and was near the fabricating shops of the patentees in Indianapolis.

In the 1930's the Montgomery County fire marshalls registered a formal complaint about the fire hazard posed by the design of the jail. As a result of a Grand Jury investigation and the reports of the fire marshalls in 1938, the rotary cylinder was welded to the stationary iron cylinder, doors were cut from each cell, and a cat walk around the second tier was added. After nearly 40 years of repeated warnings by fire marshalls, the jail was condemned in May 1973.

Like the five other rotary jails built in the Midwest, the Montgomery County Jail proved to be extremely hazardous to its inmates and must therefore be considered a failure as an experiment in penal architecture. It does represent, however, a valid attempt to provide an engineering solution to the problem of incarceration.

Montgomery County Jail

Notes

1 Other Rotary jails were: the Gallatin, Davies County, Missouri Jail built in 1888; the Maryville, Nordaway County, Missouri Jail built in 1882; the Mayville, DeKalb County, Missouri Jail built in 1885; the Council Bluffs, Pottawattamie County, Iowa Jail built in 1885; and the Wichita, Sedgewick County Jail built between 1884 and 1885.

The rotary machinery and cells supplied by Haugh, Ketcham and Company cost $10,850. The jailhouse with an adjoining sherrif's residence cost $15,150.

2 Patent No. 244,358 filed 12 July 1881.

3 The description is based upon a survey of several rotary jails presented by Luden.

4 Luden, p. 153, 156-57.